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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,202	01/17/2001	Manouchehr S. Rafie	10506/3	7556
7590	10/05/2004		EXAMINER	
PILLSBURG WINTHROP LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 10500 MCLEAN, VA 22102			PATHAK, SUDHANSU C	
			ART UNIT	PAPER NUMBER
				2634

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/764,202	RAFIE ET AL.
	Examiner	Art Unit
	Sudhanshu C. Pathak	2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on January 17<sup>th</sup>, 2001.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-43 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-43 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on January 17<sup>th</sup>, 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 2.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-to-43 are pending in the application.

### *Drawings*

2. Figure 1 should be designated by a legend such as "Prior Art" because only that which is known is illustrated.

Corrective Action is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3-11, 14, 37-41 & 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

5. The Claims 3-11 & 14 discloses an invitation burst, it is not clear where in the specification this subject matter is disclosed, furthermore, it is also not clear how the invitation burst is different from the data burst, and what is the purpose of the invitation burst.

6. The Claims 37-41 discloses a phase correction apparatus comprising means for using data of the distorted signal for removing modulated signals from the coarse estimate of carrier phase to produce a carrier

estimate. It is not clear from the specification where in the specification "removing modulated signals" is included. Furthermore, the specification refers to "unknown data symbols" (Specification, Page 21, line 23) are estimated using the coarse estimate of the carrier phase and is used to determine a fine phase estimate (Specification, Page 21, lines 21-28 & Fig. 5, elements 502, 504). This is not clearly stated in the claim 37.

7. The Claims 43 & 13 discloses, "a modem used in a join operation". It is not clear where in the specification this subject matter (join operation) is disclosed and what this means.

***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1, 2 & 15-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 26 (which includes the limitations of claims 23-25) of copending Application No. 09/849,687 (PG-Pub No. 2002/0196844). Although the

conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding to Claims 1 & 15-18:

The claim recites a method for receiving radio signals in a multiple hopping radio system comprising hopping among a plurality of radio links and receiving bursts of radio signals on the plurality of radio links. This limitation is disclosed in Claim 26 of the copending application, which discloses a method for receiving radio signals in a link hopping, burst mode radio receiver comprising receiving a first burst on a first radio link and receiving a first burst on a second radio link.

The claim also recites determining channel information for each radio link from a received burst on the radio link. This limitation is disclosed in Claim 26 of the copending application, which discloses determining the channel information for the second radio link.

The claim also recites storing the determined channel information and using the determined channel information for the radio link to receive a next received burst on the radio link. This limitation is disclosed in Claim 26 of the copending application, which discloses determining channel information for a second radio link and storing equalizer weights for the second radio link for subsequent use and using the stored information as

initial equalizer weights of the first equalizer for a second burst of the second radio signal.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Claim 26 of the copending application teaches all the limitations of Claim 1 of the application. Furthermore, Claim 26 teaches determining the channel information of the second link this is a matter of design choice and there is no criticality in determining the channel information of each radio link. The equalizer weights are determined using the channel information and storing the equalizer weights for subsequent use, this is analogous to using the stored channel information for the radio link to reliably receive the next burst.

Regarding to Claim 2:

The claim dependent on Claim 1, recites a method for receiving radio signals further comprising equalizing received radio signals according to updated equalizer weights and updating the equalizer weights for the next received burst using the determined channel information from a received burst. This limitation is disclosed in Claim 26 of the copending application, which discloses determining equalizer weights of the first equalizer and subsequently receiving the next burst using the equalizer weights obtained in the first burst as initial values. The claim 26 also discloses storing equalizer weights of a second adaptive equalizer at the end of the current burst to be used in a fixed equalizer to compensate for amplitude and phase variations of the subsequent bursts. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention that Claim 26 of the copending application teaches all the limitations of Claim 2 of the application.

10. Claim 3 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 15 (which includes the limitations of claim 1) of copending Application No. 09/849,687 (PG-Pub No. 2002/0196844). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding to Claim 3:

The claim dependent on Claim 1, recites a method for receiving radio signals further comprising the received bursts of the radio signals comprising receiving one of data burst and an invitation burst. This limitation is disclosed in Claim 15 of the copending application, which discloses a method for receiving and decoding burst radio signals receiving bursts of radio signals on a plurality of radio links comprising receiving an invitation burst for a radio link. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Claim 15 of the copending application teaches all the limitations of Claim 3 of the application.

11. Claim 12 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 16

(which includes the limitations of claim 1) of copending Application No. 09/849,687 (PG-Pub No. 2002/0196844). Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding to Claim 12 & 13:

The claim dependent on Claim 1, recites a method for receiving radio signals wherein determining channel information comprises establishing link parameters for a radio link in a new joining node joining the radio system; and storing the link parameters as initial stored channel information, this limitation is disclosed in Claim 16 of the copending application. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Claim 16 of the copending application teaches all the limitations of Claim 12 of the application.

12. Claim 19 is provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 1 of copending Application No. 09/849,687 (PG-Pub No. 2002/0196844).

Although the conflicting claims are not identical, they are not patentably distinct from each other.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding to Claim 19:

The claim dependent on Claim 15, recites a method for receiving radio signals wherein the determining channel information comprises determining the phase of a carrier of the radio signal, this limitation is disclosed in Claim 1 of the copending application. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Claim 1 of the copending application teaches all the limitations of Claim 19 of the application.

***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak



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